

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001926**Date Inspected:** 30-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China**CWI Name:** Chen Chih-Ming**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower/OBG**Summary of Items Observed:**

Floor beams FB008-01 & FB002-02

This Quality Assurance (QA) inspector arrived at ZPMC for observation of the SAS super structure fabrication of the OBG floor beams. This QA inspector performed visual and magnetic particle verification for the following 2 floor beams; FB008-01 (near side) and FB002-02 (far side). It was noted by this QA inspector of several visual discrepancies that did not meet the required AWS D1.5 bridge code. These areas were undercut that was in excess of 1mm deep on 2 vertical weldments and locations of welds that had been ground by ZPMS that did not conform to the proper fillet weld profile due to not having a smooth transition from the toe of the weld into the base material. What was observed was a sharp almost square profile at the bottom toe due to grinding and workmanship.

These areas were marked and relayed to ZPMC's CWI Chen Chih-Ming. Magnetic Particle (MT) inspection was performed at each weldment for a length of 10% for verification by this QA inspector it was noted that no rejectable indications were found in these areas. A MT report will be generated by this QA inspector for more specific locations. During this QA inspectors continued observations it was noted that ZPMC personnel was performing the Submerged Arc Welding (SAW) process for segment number Seg-013A-001 which included side plates SP9A to SP17A welded together with a Complete Joint Penetration (CJP) weld. This QA inspector observed ZPMC welding personnel Wang Lanying operating the SAW equipment and the welding parameters were verified under WPS-B-T-2221-B-L2c-S-1 as follows; 503 amps, 30 volts, and travel speed of 416 mm/min along with the required preheat and interpass temperature being monitored by ZPMC to be within the requirements of the above noted WPS. The above work continued throughout this QA inspectors shift with periodic observations being performed

Summary of Conversations:

WELDING INSPECTION REPORT

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As noted in the contents above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Pat Lowry, (858) 344-2712, who represents the Office of Structural Materials for your project.

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| Inspected By: | Riley, Ken | Quality Assurance Inspector |
| Reviewed By: | Hager, Craig | QA Reviewer |
